

0305

Interleukins 33 and 1B serum levels and common carotid arteries remodeling in hypertensive patients with obesity

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Objective: To investigate interrelations between interleukin 33 (IL-33) and 1 β (IL-1 β) serum levels and common carotid arteries (CCA) remodeling in hypertensive patients with obesity.

Method: 80 hypertensive patients (51 obese) have been observed. An ultrasound examination of CCA with estimation of its geometrical type was performed (cut-off value for vascular wall hypertrophy was vascular segment mass >0.275 g/cm, concentric remodeling was diagnosed with relative wall thickness of CCA >0.2). IL-33 and IL-1B serum levels were estimated using ELISA.

Results: IL-33 and IL-1 β levels were higher in hypertensive patients ($p<0.001$), independently of BMI. Cluster analysis was made to reveal both cytokines' levels impact on CCA geometry (see picture). IL-33 ≥ 73 pg/ml, IL-1 $\beta\geq 25$ pg/ml was associated with 80,0% prevalence of normal CCA geometry and 20,0% of its concentric hypertrophy. IL-1 $\beta\geq 20$ pg/ml with IL-33 <71 pg/ml was characterized by 80,0% prevalence of normal geometry, 10,0% of non-hypertensive concentric remodeling of CCA, 5,0% of concentric and 5,0% of eccentric hypertrophy. IL-33 ≥ 71 pg/ml with IL-1 $\beta<25$ pg/ml was associated with decrease of normal CCA geometry prevalence to 50,0% with increase of concentric hypertrophy rate to 41,7%; other 8,3% patients had eccentric hypertrophy of CCA. IL-33 <71 pg/ml, IL-1 $\beta<20$ pg/ml ($p>0.05$ vs control group) had 57,9% of normal geometry, 15,8% of concentric remodeling, 15,8% of concentric hypertrophy and 10,5% of eccentric hypertrophy of CCA.

Conclusion: IL-33 and IL-1 β serum levels were elevated in hypertensive patients independently of presence of obesity. A pronounced isolated increase in IL-33 level was associated with abrupt increase of CCA hypertrophy prevalence, especially its concentric variant. Accompanying increase in IL-1B level reduced this effect.

0473

Abdominal aortic aneurysms repair by entirely percutaneous endovascular approach using closure suture-based device. Prospective study of safety, feasibility and efficiency

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Background: Endovascular repair of abdominal aortic aneurysms (AAA) is a well documented option. This approach is usually performed by surgical cut down of the common femoral arteries (CFA). Total percutaneous access for endovascular aortic aneurysm repair (« preclose technique ») has been reported. However high bleeding risk obese patients are still considered as bad candidates for this method.

Aims: We describe our experience of the entirely percutaneous vascular approach using the Prostar XL system, in our obese population in particular.

Methods: We analyzed 164 consecutive patients treated for AAA by endovascular percutaneous route between January 2007 and February 2012. Mean age of our patients was 76 years old. 25.8% of our population were obese (mean body mass index = 36). All patients were treated with a bifurcated endoprosthesis. The diameter of the introducer was 18-French (F) for the main femoral access and 12F for the contralateral access. The success rate of the procedure has been described elsewhere. A total of non-surgical 328 femoral access sites were closed with the Prostar XL system.

Results: The success rate of the entirely percutaneous vascular approach procedure was 94,5% and reached 100% in obese population, with a mean delay to hospital discharge of 6 days. Nine procedure failures were deployed. All procedure failures occurred on the 18F side while the success rate was 100% with 12F introducers ($p=0.002$). Re-hospitalization rate due to vascular access complication (haematoma, false aneurysm, femoral abscess) was 2,4%

after a mean follow-up of 23 months, but no difference between obese and non-obese patients was found.

Conclusion: Our results indicate that even in obese patients, usually considered as relatively contra-indicated to this strategy, the entirely percutaneous approach using the Prostar device for endovascular treatment of infrarenal AAA is safe.

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0032

Analysis of blood pressure variability in the systolic hypertension with telemonitoring: feasibility and results on 108 patients

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Purpose: Blood pressure (BP) and its variability (BPV) are associated with an increased risk for cardiovascular mortality. This observational study explores the benefits of patients telemonitoring using self-measured BP to optimise treatment and its usefulness in the variability analysis

Methods: Patients with uncontrolled hypertension were enrolled during an appointment. 2 SMBP were taken in the morning, at midday and in the evening at set times, the results being sent to a secure server. After 5 days treatment was started if the mean reading was more than 140/90. Variability analysis has been realized during all the follow up. The evaluation made at the end of the first 5 days to obtain the mean, standart Deviation (SD), coefficient of variation (CV), hight and low BP

Results: 63 women and 45 men. BP = 176/96 at inclusion dropping to 160/88 after 5 days under the same treatment. Therapeutic adjustments achieved over 12,7 days with significant decrease in BP to 143/82: -17 systolic and -6 diastolic ($p<0.0001$)

Results of variability are SD=16.63 \pm 5 and CV=0.105 \pm 0.03. There is no difference according age (<70 years CV 0.104/ >70 years CV 0.106, $p=0.582$) or the level of BP (BP <160 mmhg CV 0.109/ BP >160 mm hg CV 0.100; $p=0.100$). At first variability is of 0.105 (32 measures, 4,7 days) with a not significant increase at the end: 0.112 (52 measures; $p=0.098$)

When variability >0.10 , the risk of low BP increases (104/118, $p<0.0001$; CV =0.136/0.087, $p<0.0001$), for the same mean BP(146/142, $p=0.152$), number of treatment (2.71/2.86, $p=0.443$) and for the same age (69,8/66,8, $p=0.152$) SBP of all measures is lowest at midday: 164mm hg morning, 153mm hg midday (-11mm, $p<0.0001$), 163mm hg evening with the same difference at the end of follow up (147/138). The gap increases >74 years (-14mm de hg; 170/156)

Conclusions: Awareness of the variance between average clinic and average telemonitoring BP may influence the diagnostic and management of hypertension. Telemonitoring of BP allows the real time measure of the mean, SD, CV and hight and low BP after modification or new treatment. The real time analysis allows the control of hypertension to improve (figure next page).

0130

Plasma interleukin-18 levels depend on hypertriglyceridemic waist phenotype and gender in patients with arterial hypertension

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The aim our study was to investigate cardiometabolic risk factors and plasma interleukin-18 (IL-18) levels in relationships with hypertriglyceridemic waist phenotype (HTGW) depend on gender of patients with arterial hypertension (AH).

Methods: Anthropometric parameters, carbohydrate and lipid metabolism, circulating IL-18 levels in 101 patients with AH (men (n=45; 44.6%) and women (n=56; 55.4 %) aged 32-80 years) were examined. HTGW was defined